

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P563361

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563361
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-3LO-40-UNV-93-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8847.0 lumens
Efficiency: N/A
Efficacy: 126.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

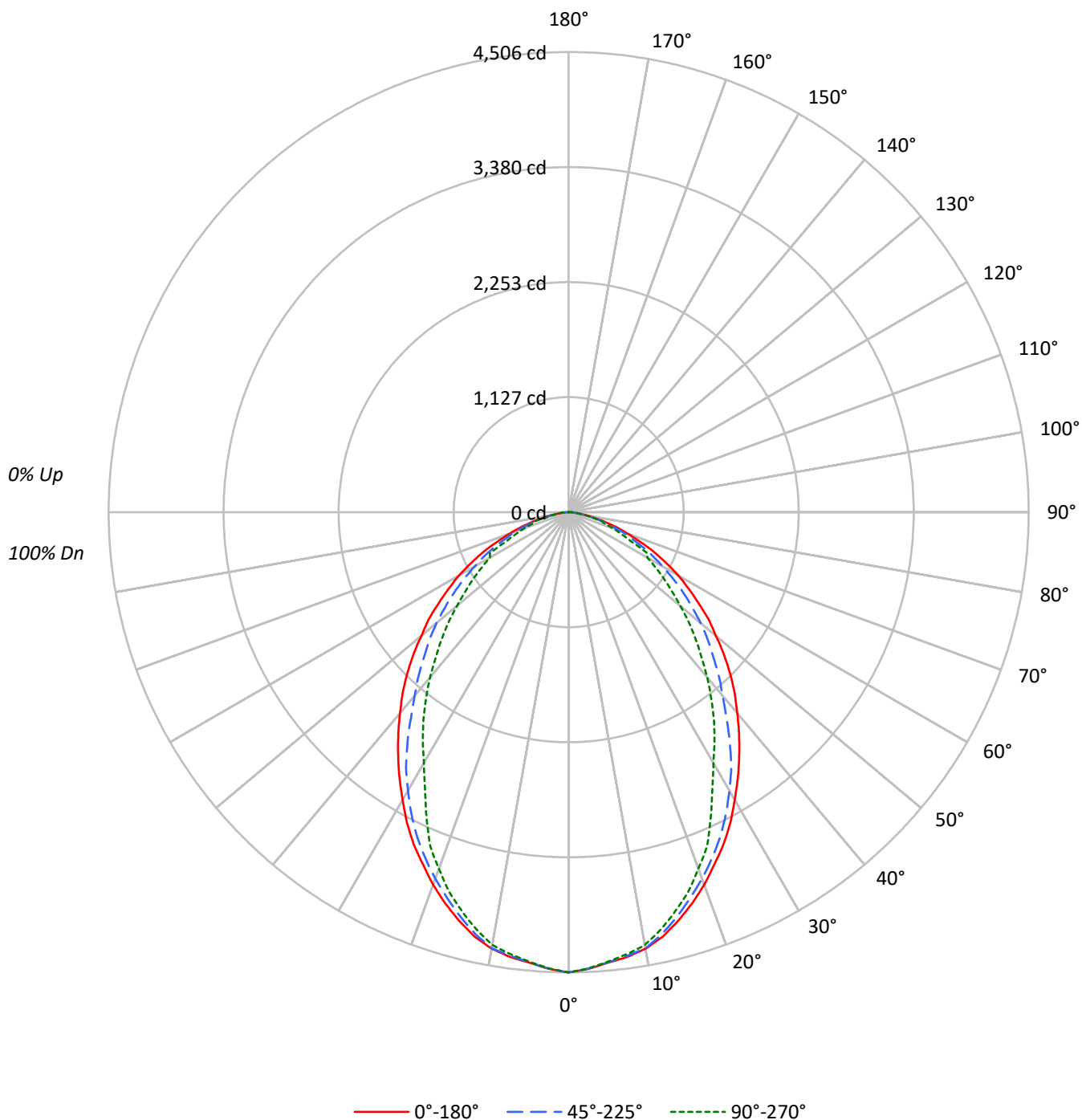
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20						20
RC	80					70					50					30						10
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10	
RCR																						
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102	
1	110	106	102	99		108	104	100	97		100	97	94		96	94	91		92	90	89	
2	101	94	88	83		99	92	87	82		89	84	80		86	82	78		83	79	77	
3	93	84	77	71		91	82	76	70		79	74	69		77	72	68		74	70	67	
4	86	75	67	61		84	74	66	61		72	65	60		69	64	59		67	62	58	
5	80	68	60	54		78	67	59	53		65	58	53		63	57	52		61	56	52	
6	74	62	53	48		72	61	53	47		59	52	47		57	51	47		56	50	46	
7	69	56	48	43		67	56	48	42		54	47	42		53	46	42		51	46	42	
8	65	52	44	38		63	51	44	38		50	43	38		49	42	38		48	42	38	
9	61	48	40	35		59	47	40	35		46	39	35		45	39	34		44	38	34	
10	57	44	37	32		56	44	37	32		43	36	32		42	36	32		41	36	32	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6063	6063	6063
5°	5981	5974	5967
10°	5929	5922	5880
15°	5769	5711	5632
20°	5558	5468	5319
25°	5329	5213	4888
30°	5051	4889	4403
35°	4784	4518	4073
40°	4511	4118	3706
45°	4253	3807	3351
50°	3937	3533	2988
55°	3642	3202	2677
60°	3337	2860	2397
65°	2936	2505	2123
70°	2419	2193	1804
75°	1923	1679	1760
80°	1292	1211	1130
85°	804	965	1125

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4253 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	419.5	4.7
10°-20°	1151.3	13.0
20°-30°	1593.9	18.0
30°-40°	1699.5	19.2
40°-50°	1550.5	17.5
50°-60°	1214.7	13.7
60°-70°	791.7	8.9
70°-80°	350.7	4.0
80°-90°	75.3	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	3164.6	35.8
0°-40°	4864.2	55.0
0°-60°	7629.3	86.2
0°-90°	8847.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8847.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4506	4506	4506	4506	4506	
5°	4428	4423	4423	4418	4418	420
15°	4142	4142	4100	4058	4043	1164
25°	3590	3569	3512	3386	3293	1648
35°	2912	2892	2751	2542	2480	1821
45°	2235	2188	2001	1834	1761	1722
55°	1552	1506	1365	1204	1141	1393
65°	922	870	787	802	667	909
75°	370	344	323	307	339	396
85°	52	57	62	68	73	72
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4506.5	4506.5	4506.5	4506.5	4506.5
2.5°	4475.3	4475.3	4475.3	4470.1	4470.1
5°	4428.4	4423.2	4423.2	4418.0	4418.0
7.5°	4391.9	4386.7	4381.5	4376.3	4365.9
10°	4339.8	4339.8	4334.6	4308.6	4303.4
12.5°	4256.5	4251.3	4230.4	4194.0	4183.5
15°	4141.9	4141.9	4100.2	4058.5	4042.9
17.5°	4016.8	4011.6	3959.5	3917.8	3897.0
20°	3881.4	3870.9	3818.8	3751.1	3714.6
22.5°	3730.3	3730.3	3667.8	3579.2	3542.7
25°	3589.6	3568.8	3511.5	3386.4	3292.6
27.5°	3428.1	3396.8	3334.3	3157.2	3047.8
30°	3251.0	3235.3	3146.8	2917.5	2834.2
32.5°	3084.2	3058.2	2964.4	2724.8	2657.0
35°	2912.3	2891.5	2750.8	2542.4	2479.9
37.5°	2740.4	2714.3	2537.2	2370.5	2292.3
40°	2568.5	2537.2	2344.4	2193.4	2110.0
42.5°	2407.0	2365.3	2177.7	2016.2	1922.4
45°	2235.0	2188.1	2000.6	1833.9	1760.9
47.5°	2063.1	2021.4	1849.5	1677.6	1594.2
50°	1880.8	1844.3	1688.0	1516.1	1427.5
52.5°	1729.7	1672.4	1521.3	1349.4	1276.4
55°	1552.5	1505.7	1365.0	1203.5	1141.0
57.5°	1391.0	1344.1	1213.9	1062.8	1010.7
60°	1240.0	1172.2	1062.8	932.6	890.9
62.5°	1073.2	1021.1	927.4	818.0	870.0
65°	922.1	870.0	786.7	802.3	666.9
67.5°	755.4	729.4	656.4	583.5	562.7
70°	614.8	583.5	557.5	479.3	458.5
72.5°	489.7	458.5	422.0	380.3	364.7
75°	369.9	343.9	323.0	307.4	338.6
77.5°	255.3	244.9	229.2	213.6	208.4
80°	166.7	161.5	156.3	151.1	145.9
82.5°	99.0	99.0	99.0	99.0	99.0
85°	52.1	57.3	62.5	67.7	72.9
87.5°	31.3	31.3	36.5	41.7	46.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)